

SECTION CC-1 NSN/ITEM DESCRIPTION

8940- - -

APPLE SLICES IN SPICED SAUCE, PACKAGED IN A FLEXIBLE POUCH, SHELF STABLE, 5 ounces

Each component is consumed by combat personnel under worldwide environmental extremes as part of an operational ration, which is the sole source of nutritional intake. It is essential that this item be produced in accordance with good commercial practice to attain high standards of appearance, odor, flavor, and texture so that high levels of troop acceptance are achieved.

C-2 PERFORMANCE REQUIREMENTS

A. First article. A sample shall be subjected to first article inspection in accordance with the tests and inspections of Section E of this Product Technical Data Package.

B. Commercial sterility. The packaged food shall be processed until commercially sterile.

C. Shelf life. The packaged food shall meet the minimum shelf life requirement of 36 months at 80°F.

D. Appearance.

(1) Apples. The apple slices shall be not less than 1-1/4 inches in length and 1/4 inch in thickness. The slices shall have a characteristic cooked color.

(2) Sauce. The sauce shall have a translucent pale gold color with visible specks of ground spices.

(3) General. The packaged food shall be free from core and seed material. The packaged food shall be practically free of peel material.

E. Odor and flavor.

(1) General. The packaged food shall have a sweet, but slightly acidic odor and flavor of cooked apples with cinnamon.

(2) Foreign. The packaged food shall be free from foreign odors and flavors such as, but not limited to, burnt, scorched, rancid, sour, or stale.

F. Texture.

(1) Apples. The apple slices shall be firm, yet tender.

(2) Sauce. The sauce shall be thick and slightly gelatinous.

SECTION C CONTINUEDG. Weight.

(1) Net weight. The average net weight shall be not less than 5.0 ounces. No individual pouch shall contain less than 4.5 ounces.

(2) Drained weight. The drained weight in an individual pouch shall be not less than 2.6 ounces.

H. Palatability. The finished product shall be equal to or better than the approved first article when applicable, or other approved model, in palatability and overall appearance.

I. Nutrient content.

(1) Water content. The water content shall be not greater than 80.0 percent.

(2) Apple slices in spiced sauce are an insignificant source for protein, fat, ash, and salt with values less than 1.0 percent.

J. pH content. The pH shall be in the range of 2.8 to 3.8.

C-3 MISCELLANEOUS INFORMATION

A. Ingredients and formulation. Ingredients may be as follows: Water, apples, sugar, modified food starch, margarine, ascorbic acid, salt, apple juice, lemon juice, and spices. Sauce ingredient and formulation percentages may be as follows:

| (1) <u>Sauce</u> | <u>Ingredients</u> | <u>Percent by weight</u> |
|------------------|-------------------------------|--------------------------|
| | Juice, apple, single strength | 36.96 |
| | Sugar, granulated | 35.70 |
| | Water | 14.94 |
| | Margarine | 5.57 |
| | Starch, waxy maize, modified | 4.56 |
| | Juice, lemon, single strength | 1.52 |
| | Salt | 0.25 |
| | Cinnamon, ground | 0.25 |
| | Nutmeg, ground | 0.25 |

(2) Apples. Product may be made with fresh apples or with individually quick frozen (I.Q.F.) apple slices prepared from U.S. No. 2 or better of the U.S. Standards for Grades of Apples for Processing.

SECTION DD-1 PACKAGING

A. Product shall be filled into pouches and the pouches shall be filled into cartons. Both shall meet the requirements of Section 3 and Figures 1 and 2 of MIL-PRF-44073. Verification testing and inspection of pouch and carton conformance to the requirements shall be by the testing and inspections of

SECTION D CONTINUED

Section 4 of MIL-PRF-44073 and the Quality Assurance Provisions of Section E of this Product Technical Data Package.

D-2 LABELING

A. Pouches. Each pouch shall be clearly printed or stamped, in a manner that does not damage the pouch, with permanent black ink or any other contrasting color, which is free of carcinogenic elements or ingredients. To avoid erroneous marking of pouches, the product name, lot number and filling equipment number shall be applied prior to thermal processing. All other marking may be applied before or after thermal processing.

(1) Product name (1/8 to 7/16 inch block letters). Commonly used abbreviations may be used when authorized by the inspection agency.

- (2) Pouch code includes: 1/
Lot Number
Filling equipment identification number
Official establishment number (for example, EST-38) (applicable to class 1 and 3 only)
Retort identification number 2/
Retort cook number 2/

1/ Shall be code marked as follows: The lot number shall be expressed as a four digit Julian code. The first digit shall indicate the year of production and the next three digits shall indicate the day of the year (Example, March 19, 1995 would be coded as 5078). The Julian code shall represent the day the product was packaged into the pouch and processed. Sub-lotting (when used) shall be represented by an alpha character immediately following the four digit Julian code. Following the four digit Julian code and the alpha character (when used), the other required code information shall be printed in the sequence as listed above. For food products that do not require an establishment number, the Julian code shall be preceded by three capital letters, which represent the packer's name.

2/ Required only when retort process used.

B. Cartons.

(1) The cartons shall be clearly printed on the largest panel with permanent black ink as follows:

- Product name (7/32 to 9/32 inch block letters).
Ingredients (class 1, 2, and 3 - mandatory; class 4 - not applicable).
Net weight.
Name and address of packer.
Code (same as pouch code, see pouches). 1/ 2/
USDA approval stamp for the packers plant (applicable to meat and poultry items only).

1/ Code may be ink printed or embossed on the outside of any other panel except the largest panels of the carton.

SECTION D CONTINUED

2/ Official establishment number not required in carton code.

(2) The carton shall display the "Nutrition Facts" label in accordance with the Nutrition Labeling and Education Act (NLEA).

D-3 PACKING

A. Packing for shipment to ration assembler. Seventy-two pouches (of the same product) in cartons shall be packed flat or on edge in a snug-fitting fiberboard shipping container conforming to style RSC, type CF, class domestic, grade 200 of ASTM D 5118, Standard Practice for Fabrication of Fiberboard Shipping Boxes. Each container shall be securely closed in accordance with ASTM D 1974, Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Shipping Containers.

D-4 MARKING

A. Shipping containers. Shipping containers shall be marked in accordance with DPSC Form 3556, Marking Instructions for Shipping Cases, Sacks and Palletized/Containerized Loads of Perishable and Semiperishable Subsistence.

SECTION E INSPECTION AND ACCEPTANCE

E-6 QUALITY ASSURANCE PROVISIONS

Definitions.

(1) Critical defect. A critical defect is a defect that judgment and experience indicate would result in hazardous or unsafe conditions for individuals using, maintaining, or depending on the item; or a defect that judgment and experience indicate is likely to prevent the performance of the major end item, i.e., the consumption of the ration.

(2) Major defect. A major defect is a defect, other than critical, that is likely to result in failure, or to reduce materially the usability of the unit of product for its intended purpose.

(3) Minor defect. A minor defect is a defect that is not likely to reduce materially the usability of the unit of product for its intended purpose, or is a departure from established standards having little bearing on the effective use or operation of the unit.

Quality Assurance Provisions.

The following quality assurance criteria, utilizing ANSI/ASQC Z1.4-1993, Sampling Procedures and Tables for Inspection by Attributes, are recommended.

A. Classification of inspections. The inspection requirements specified herein are classified as follows:

SECTION E CONTINUED

(1) First article inspection. The first article shall be inspected in accordance with the provisions of this Product Technical Data Package and evaluated for overall appearance and palatability. Any failure to conform to the performance requirements or any appearance or palatability failure shall be cause for rejection of the first article.

(2) Conformance inspection. Conformance inspection shall include the product examination and the methods of inspection cited in this section.

* B. Product examination. The finished product shall be examined for compliance with the performance requirements specified in Section C of this Product Technical Data Package utilizing the double sampling plans indicated in ANSI/ASQC Z1.4 - 1993. The lot size shall be expressed in pouches. The sample unit shall be the contents of one pouch. The inspection level shall be S-3 and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 1.5 for major defects and 4.0 for minor defects. Defects and defect classifications are listed in Table I. For drained weight inspection, a separate set of pouches shall be selected from the lot using the same sampling criteria as above. The pouches shall be immersed in 140°F to 190°F water for 10 minutes prior to the drained weight inspection.

TABLE I. Product defects 1/ 2/

| <u>Category</u> | | <u>Defect</u> |
|-----------------|--------------|---|
| <u>Major</u> | <u>Minor</u> | |
| | | <u>Appearance</u> |
| 101 | | Apple slices size not as specified |
| | 201 | Presence of core and seed material |
| | 202 | Presence of peel material which detracts from overall appearance |
| | 203 | Sauce not translucent pale gold color with visible specks of ground spices |
| | | <u>Odor and flavor</u> |
| | 204 | Not sweet, and slightly acidic odor and flavor of cooked apples with cinnamon |
| | | <u>Texture</u> |
| | 205 | Apple slices not firm nor tender |
| | 206 | Sauce not thick and slightly gelatinous |
| | | <u>Weight</u> |
| | 207 | Net weight of an individual pouch less than 4.5 ounces <u>3/</u> |

PCR-A-0001

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1/ Presence of any foreign odors and flavors such as, but not limited to burnt, scorched, rancid, sour, or stale shall be cause for rejection of the lot.

2/ Finished product not equal to or better than the approved first article, when applicable, or other approved model in palatability and overall appearance shall be cause for rejection of the lot.

3/ If the sample average net weight is less than 5.0 ounces, the lot shall be rejected.

C. Methods of inspection.

(1) Commercial sterility. Testing for commercial sterility shall be in accordance with MIL-PRF-44073.

(2) Shelf life. Compliance with shelf life shall be determined by incubation for 1 month at 120°F or 6 months at 100°F or 36 months at 80°F. Contractor shall provide a certificate of conformance.

(3) Drained weight. The pouch contents shall be poured into a flat-bottom container. A minimum of three times the pouch's volume of 180°F to 190°F water shall be added to the container so as to cover the contents. The contents and water shall be gently agitated so as to separate the sauce from the slices without breaking the slices. The contents shall then be poured into a U.S. Standard 1/4 inch sieve in a manner that will distribute the product over the sieve without breaking the slices. The sieve area shall be such that the distributed product does not completely cover all the openings of the sieve. The sieve shall be tilted at approximately a 45° angle and allowed to drain for 2 minutes before determining the drained weight by subtracting the sieve tare weight from the gross weight. The drained weight shall be reported to the nearest 0.1 ounce.

(4) Nutrient content. The sample to be analyzed shall be a composite of eight filled and sealed pouches which have been selected at random from the lot. The composited sample shall be prepared and analyzed for water content in accordance with the Method Number 934.06 of the Official Methods of Analysis of AOAC International. Test results shall be reported to the nearest 0.1 percent. Any result not conforming to the requirements specified in Section C of this Product Technical Data Package shall be cause for rejection of the lot.

(5) pH content. Three filled and sealed pouches which have been selected at random from the lot. The samples shall be prepared and individually analyzed for pH in accordance with the Method Number 981.12 of the Official Methods of Analysis of AOAC International. Test results shall be reported to the nearest 0.1. Any result not conforming to the requirements specified in Section C of this Product Technical Data Package shall be cause for rejection of the lot.

SECTION J REFERENCE DOCUMENTS

DPSC FORM

DPSC FORM 3595 DPSC Master Solicitation for Semiperishable Subsistence,
Jan 92

DPSC FORM 3556 Marking Instructions for Shipping Cases, Sacks and
Palletized/Containerized Loads of Perishable and Semiperishable
Subsistence, May 96

FEDERAL SPECIFICATION

FED-STD-595 - Colors Used in Government Procurement

MILITARY SPECIFICATION

MIL-PRF-44073 - Packaging of Food in Flexible Pouches

NON-GOVERNMENTAL STANDARDS

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D 1974 - Standard Practice for Methods of Closing, Sealing, and
Reinforcing Fiberboard Shipping Containers

D 3985 - Oxygen Gas Transmission Rate Through Plastic Film and
Sheeting Using a Coulometric Sensor

D 5118 - Standard Practice for Fabrication of Fiberboard Shipping
Boxes

F 372 - Standard Test Method for Water Vapor Transmission of Flexible
Barrier Materials Using an Infrared Detection Technique

ANSI/ASQCZ1.4-1993 - Sampling Procedures and Tables for Inspection by
Attributes

AOAC INTERNATIONAL

Official Methods of Analysis of the AOAC International

AMSSB-RCF-F(N) (Richards/5037)

16 November 2000

TO: DSCP-HROS (D. Anthony/7160)

SUBJECT: (ES01-004); Reply to request for waiver, PCR-A-0001, Apple Slices in
Spiced Sauce, DSCP Case No. 1-R-032-00.

1. Date received: 1 November 2000
Date due: 13 November 2000

Date replied: 16 November 2000

2. Natick has received and evaluated the sample product. We concur with the vendors request to change the size requirement of the Apple Slices from 65% not less than 1 1/4 inches to 55% not less than 1 1/4 inches for the remainder of the current contract or until such time that this issue is resolved.

3. Natick is available for any technical assistance needed in resolving this issue pending Engineering Support resources. It is recommended that the production of this product, from start to finish be evaluated to determine a satisfactory resolution of this matter.

4. In addition, the following changes shall be made to the subject PCR for all current, pending, and future procurements:

Under C-2 PERFORMANCE REQUIREMENTS, I. Nutrient content., (2), Remove the entire sentence: "Apple slices in spiced sauce are an insignificant source for protein, fat, ash, and salt with values less than 1.0 percent."

Under SECTION E INSPECTION AND ACCEPTANCE, E-6 QUALITY ASSURANCE PROVISIONS, A. Classification of inspections., Replace "(1) First article inspection" with "(1) Product standard inspection. The first article or product demonstration model shall be inspected in accordance with the provisions of this document and evaluated for overall appearance and palatability. Any failure to conform to the performance requirements or any appearance or palatability failure, shall be cause for rejection of the lot. The approved first article or product demonstration model shall be used as the product standard for periodic review evaluations. All food components that are inspected by the USDA shall be subject to periodic review sampling and evaluation. The USDA shall select sample units during production of contracts and submit them to the following address for evaluation:

US Army Soldier & Biological Chemical Command
Soldiers System Ctr., Natick Soldier Center
Attn: AMSSB-RCF-F(N)
Natick, MA 01760-5018

One lot shall be randomly selected during each calendar month of production. Six (6) sample units of each item produced shall be randomly selected from that one production lot. The six (6) sample units shall be shipped to Natick within two (2) working days upon completion of all USDA inspection requirements. The sample units will be evaluated for the characteristics of appearance, odor, flavor, texture and overall quality. Failure of samples to conform to all such characteristics may be cause for rejection."

5. POC for this action is Mr. Allen Richards, X5037.

DONALD A. HAMLIN
Team Leader
DoD Food Engineering
Services Team

Document changes.

(ARichards)

CF:

| | | | | |
|----------|------------|-----------|------------|--------|
| Arthur | Hoffman | Lecollier | Richards | Wagner |
| Beward | Kavanagh | Lowry | Richardson | |
| Galligan | Konrady A. | Malason | Salerno | |

Hamlin

Konrady M.

Nattress

Valvano

AMSSB-RCF-F(N) (Friel/4261)

14 June 2001

TO: DSCP-HRAC(D. Anthony/4477)

SUBJECT: (ES01-073) Request for Technical Support; Ameriquel Foods; Apple Slices in Spiced Sauce, PCR-A-0001, Section C-2.D.1 Apple Appearance; DSCP Case # 1-R-014-01

1. Date received: 31 May 2001
Date due: 8 June 2001
Date extended: 13 June 2001
Date replied: 14 June 2001

2. Natick received and evaluated apple slices from Ameriquel Foods. Natick concurs with the contractor's request to make a permanent document change to the requirement and defect from "65 percent at 1-1/4 inches" to 65 percent at 3/4 inch".

The change will allow the vendor to utilize an industry standard apple size that will decrease the sorting and result in less damage to the apple slices during the pouch filling process. The change maintains a quality product with a cost savings."

3. Natick recommends the following changes to the subject document for all current, pending and future procurements until the documents are formally amended or revised:

a. Section C-2, D (1), line 1, delete "1-1/4 inches", insert "3/4 inches"

b. Section E-6, B. Table I, Major defect 101, delete "1-1/4 inches", insert "3/4 inches"

4. The Army representative, Mrs. Salerno, was contacted and concurs with Natick's recommendations.

DONALD A. HAMLIN
Team Leader
Food Engineering Services Team
Combat Feeding Program

ES REQUIRED

MFriel

CF:

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|-----------|---------------|
| Alyward | H. Richardson |
| Loveridge | A. Boies |
| Richards | Salerno |
| Valvano | M.Malason |
| Sherman | D.Anthony |
| A.Konrady | J.Lecollier |
| M.Konrady | A.Lowry |
| Nattress | D.Kavanagh |

Hoffman
Beward
Wagner

C.Galligan
D.Arthur

AMSSB-RCF-F(N) (Friel/4261)

2 April 2002

TO: DSCP-HRAC (Ferrante/2869)

SUBJECT: (ES02-092) Fruits, Wet Pack, PCR-F-002A, Solicitation; Apple Slices, PCR-A-0001, Solicitation; and MIL-PRF-44073F, Packaging of Foods in Flexible Pouches

1. Natick reviewed the solicitation of the subject documents that were submitted by DSCP due to concerns of tears, cuts, holes, abrasions and leakers on pouches.

2. Based on information provided by the AVI on tears, cuts, holes, abrasions and leakers in wet pack fruit at the March 2002 Quality Summit, it was investigated and later determined that the wet pack fruit contract had not incorporated the industry-wide change to the '*quad-laminate*' material structure as stated to be used by the MIL-PRF-44073, Packaging of Foods in Flexible Pouches.

Natick assures DSCP at this time that the current MIL-PRF-44073 does not provide for vendors to bid or supply wet pack fruit (or any other products covered by the MIL-PRF-44073) in pouches constructed of the 'old' trilaminate material.

3. While reviewing Solicitation SPO300-02-R-7047, Natick noted two references to 'Trilaminate' material that should be modified.

The two references are on page 23 of 128, para II, A.,1.(1) and para II, A.,2.,(1): In each case delete "Trilaminate".

Natick recommends to DSCP to either substitute "*Quad-laminate*" in place of 'trilaminate' or to leave out the descriptor and begin the sentence with "Pouch".

4. With this review action, Natick expects to see all current and future wet pack fruit procurements to be bid and performed using the '*quad-laminate*' pouch (as required) and will also expect to see a reduction in wet pack fruit pouch defects in future quality review sessions.

DONALD A. HAMLIN
Team Leader
Food Engineering Services Team
Combat Feeding Program

MFriel

CF:

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|------------|----------|---------------|
| Aylward | Sherman | Ferrante |
| Friel | Trottier | Galligan |
| Hamlin | Valvano | Lowry |
| Hill | Anthony | Kavanagh |
| Konrady A. | Arthur | Malason |
| Konrady M. | Beward | Richardson H. |

Moody Charette Salerno
Richards Hoffman

AMSSB-RCF-FN (Valvano/4259)

8 April 2002

TO: DSCP-HRAA (LeCollier/3625)

Subject: (ES02-105) Technical Inquiry; Various MRE Documents (listing below);
Clarify Carton labeling information

Ref: Quality Summit Mar 13, 2002, Industry One on One Sessions.

1. Based on discussions at referenced meeting, the U.S. Army Soldier and Biological Chemical Command, Soldier Systems Center (SBCCOM) has decided to clarify the carton labeling information since the requirement as written has been misinterpreted.

2. SBCCOM requests that DSCP implement the following change to the listed subject documents for all current, pending and future procurements until the documents are formally amended or revised:

In Section D, D-2 Labeling, B Cartons: Delete Footnote 1 entirely and insert:

"1/ Code may be ink printed on any outside carton panel. Code may be embossed on any outside carton panel except the largest panels of the carton."

3. The affected MRE entrée related documents are as follows:

| | | |
|--|--------------|-----------|
| Clam Chowder, New England style, Pouch | PCR-C-045 | 25 Oct 01 |
| Pork Rib, Boneless, Imitation, Pouch | PCR-P-028 | 25 Oct 01 |
| Fruits, Wet Pack, Pouch | PCR-F-002A | 24 Oct 01 |
| Vegetable Manicotti, Pouch | PCR-V-002 | 24 Oct 01 |
| Beef Roast w/Vegetables, Pouch | PCR-B-035 | 24 Oct 01 |
| Chili and Macaroni, Pouch | PCR-C-027 | 15 Nov 00 |
| Beef Stew, Pouch | PCR-B-020 | 15 Nov 00 |
| Beef Ravioli in Meat Sauce, Pouch | PCR-B-021 | 15 Nov 00 |
| Beef w/Mushrooms in Sauce, Pouch | PCR-B-022 | 15 Nov 00 |
| Beef Patty, Grilled, Pouch | PCR-B-029 | 15 Nov 00 |
| Beefsteak, Grilled w/Mushroom Gravy, Pouch | PCR-B-030 | 15 Nov 00 |
| Pork Chop, Jamaican, Pouch | PCR-P-012 | 15 Nov 00 |
| Seafood Tortellini, Pouch | PCR-S-011 | 15 Nov 00 |
| Turkey Breast, in Gravy w/Potatoes, Pouch | PCR-T-004 | 15 Nov 00 |
| Country Captain Chicken, Pouch | PCR-C-019A | 31 Jul 00 |
| Jambalaya w/Ham & shrimp, Pouch | PCR-J-001 | 30 Sep 99 |
| Beef Enchilada in Sauce, Pouch | PCR-B-010(1) | 30 Sep 99 |
| Potatoes, Mashed, Pouch | PCR-P-011 | 30 Sep 99 |
| Black Bean and Rice Burrito, Pouch | PCR-B-0002 | 17 Dec 97 |
| Spaghetti w/Meat Sauce, Pouch | PCR-S-0002 | 5 Nov 97 |
| Pork Chow Mein, Pouch | PCR-P-0002 | 5 Nov 97 |
| Chicken and Rice, Pouch | PCR-C-0005 | 5 Nov 97 |
| Chicken Stew, Pouch | PCR-C-0006 | 5 Nov 97 |
| Beef Frankfurters, Pouch | PCR-B-0003 | 5 Nov 97 |
| Pasta w/Vegetables in Cheese Sauce, Pouch | PCR-P-0001 | 22 Sep 97 |

| | | |
|--|------------|-----------|
| Noodles, Buttered, Pouch | PCR-N-0001 | 22 Sep 97 |
| Meatloaf w/Gravy, Pouch | PCR-M-0001 | 22 Sep 97 |
| Chicken Breast w/Salsa, Pouch | PCR-C-0002 | 22 Sep 97 |
| Chicken Breast in Thai Sauce, Pouch | PCR-C-0003 | 22 Sep 97 |
| Beef in Teriyaki Sauce w/Vegetables, Pouch | PCR-B-0001 | 22 Sep 97 |
| Apple Slices in Spice Sauce, Pouch | PCR-A-0001 | 4 Apr 97 |

4. Several MRE related component documents, i.e. breads, cakes, cookies, do not require a carton.

5. Several MRE entrée related documents from the Oct 1998 time frame did not contain the specific labeling of pouches and cartons inclusively. They referenced MIL-PRF-44073 in the Section D requirements.

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6. Therefore, SBCCOM requests that DSCP implement the following change to the Quality Assurance Provisions and Packaging Requirements for MIL-PRF-44073E Packaging of Foods in Flexible Pouches for all current and pending procurements until the document is formally amended or revised:

In III, A, 1 Labeling and marking, b, Cartons: Delete Footnote 1 entirely and insert:

"1/ Code may be ink printed on any outside carton panel. Code may be embossed on any outside carton panel except the largest panels of the carton."

DONALD A. HAMLIN
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CF: NSC:
Alyward
Friel
Hamlin
Hill
Konrady A.
Konrady M.
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Richards
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Trottier
Valvano

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CF: DSCP & SVCs:
Anthony
Arthur
Beward
Charette
Ferrante
Galligan
Hoffman
Lowry
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Salerno

